PATENT **040092/QUALP839US**

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Date: December 22, 2008 /Luke Clossman/
Luke Clossman

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:	
Appellant(s): Sanjiv Nanda	Examiner: Raj K. Jain
Serial No: 10/762,116	Art Unit: 2616
Filing Date: January 20, 2004	Conf. No: 3945

Title: NETWORK USING RANDOMIZED TIME DIVISION DUPLEXING

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Appellant submits this brief in connection with an appeal of the above-identified patent application. A credit card payment form is filed concurrently herewith in connection with all fees due regarding this appeal brief. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [QUALP839US].

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I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is Qualcomm Incorporated, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 1-22 stand rejected by the Examiner. The rejection of claims 1-22 is being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

The Examiner has entered the amendments submitted after the Final Office Action for purposes of Appeal. (*See* Communication from Examiner dated September 15, 2008).

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))

Independent claim 1 is directed towards network node (Fig. 1, 101, Fig. 9) having a transmitter (Fig. 9, 901), a receiver (Fig. 9, 903), and a controller (Fig. 9, 913). The controller may be configured to automatically and repeatedly cause the network node to cycle back and forth between transmitting information on a network with the transmitter and receiving information with the receiver from the network (Specification, paragraphs 90-92), wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern (Specification, paragraph 92, Fig. 6).

Independent claim 11 is directed towards a process of operating a network node, including automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network and receiving information from the network (Specification, paragraphs 90-92), wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern (Specification, paragraph 92, Fig. 6).

Independent claim 21 is a means plus function claim and is directed towards a network node comprising means (transmitter 901, Fig. 9) for transmitting information (Specification, paragraph 00136), means (receiver 903, Fig. 9) for receiving information (Specification, paragraph 00136), and means (controller 913, Fig. 9) for automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network with the transmitter and receiving information with the receiver from the network (Specification, paragraphs 90-92), wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern (Specification, paragraph 92, Fig. 6).

Claim 22 is an independent claim is directed towards a computer readable media embodying a program of instructions executable by a computer program to perform a method of operating a network node, the method comprising automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network and receiving information from the network (Specification, paragraphs 90-92), wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern (Specification, paragraph 92, Fig. 6).

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Whether claims 1-22 are anticipated by Johansson et al. (US 7,058,050 B2) under 35 U.S.C. §102(e).

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Johansson et al. fails to teach "a controller configured to *automatically and repeatedly* cause the network node to *cycle back and forth between transmitting* information on a network with the transmitter *and receiving* information with the receiver from the network".

Claims 1-22 stand rejected under 35 U.S.C. §102(e) as being anticipated by Johansson et al. (US 7,058,050 B2). It was alleged that Johansson et al teaches all of the elements of Appellants' claimed subject matter. Appellant respectfully disagrees.

It was alleged that Johansson et al. teaches "a controller configured to ***automatically and repeatedly*** cause the network node to ***cycle back and forth between transmitting*** information on a network with the transmitter ***and receiving*** information with the receiver from the network, ***wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern"*** in column 17, line 43 to column 18, line 20. Alternatively, it was alleged that Johannson et al. "explicitly" teaches this feature in column 4, lines 45-60.

Regarding column 17, line 43 to column 18, line 20, this section of the Johannson specification teaches a "time point" method for providing inter-piconet communications. The time point method defines a single point in time, time slot, or time interval where communications may start, without defining the exact length of the communication window. (*Johansson et al., column 17, lines 46-51*) The time point may be periodically repeated. However, this is not the same as ***automatically and repeatedly transmitting and then receiving*** information from a network, as recited in all of Appellants' independent claims. The system described by Johansson et al. defines a predetermined point in time to initiate communications, and the predefined point in time may be periodically repeated (for example, a predetermined time slot in a Bluetooth protocol). However, it is the ***time point*** that is periodically repeated, not an automatic repetition between transmitting and receiving modes. There is absolutely no teaching or suggestion that each transmission is followed by a reception of data. Based on this analysis alone, the rejection to independent claims 1, 11, 21, and 22 should be reversed.

It was further alleged that Johannson et al. teaches the feature of ***automatically and repeatedly transmitting and then receiving*** information in column 4, lines 45-60. This section of Johannson et al. teaches a mobile terminal that can belong to two piconets simultaneously. It further teaches that such a mobile terminal can only transmit or receive data in one piconet at a time. Thus, such a mobile terminal may alternate between communicating in one piconet and then the other. However, this is not the same thing as automatically and repeatedly transmitting and then receiving information.

It was further alleged that "The time point method defines a single point in time, time slot or time interval, which are used for information exchange on a per window basis (for example a period for recurring communication session, see column 17 lines 5-15). Thus if a communication session is initiated using a fixed time interval between two nodes of interest, the session cycles after each time interval to transmit its information in the next interval. One skilled in the art will appreciate a "communication session" constitutes both transmission and reception within a network accordingly. Thus even an acknowledgement from the receiver back to the transmitter would constitute a communications session of cyclic transmission and reception (column 4 lines 12-16) of data or information." (Final Office Action, page 5 last paragraph to page 6, first paragraph). Appellants agree that the time point method defines a single point in time, time slot or time interval, which are used for information exchange on a per window basis.

Appellants further agree that when a communication session is initiated, the session cycles after each time interval to *transmit* its information in the next interval. Note, however, that the time point method does not *require* that a transmit cycle be followed by a receive cycle. Finally, Appellants generally agree that a communication session constitutes both transmission and reception and that an acknowledgement may constitute such a communication "session". However, there is no teaching or suggestion in Johannson et al. that acknowledgements are received after each and every transmission of information or that this cycle is repeated infinitum.

Appellants again insist that Johannson et al. fails to teach each and every element of Appellants' claimed subject matter and respectfully request that the rejections be reversed.

B. Johansson et al. fails to teach that "the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern".

It was alleged that Johannson et al. teaches "wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern" as recited in Appellants' independent claims. It was alleged that Johannson et al. teaches this feature in column 7, lines 1-4 as "different pattern schemes can be used, col. 7 lines 1-4,including a fixed time period scheme and therefore a pre-determined pattern" (Final Office Action, page 3, second paragraph). Appellants do not believe that this section from Johannson et al. teaches or suggests the feature in question. The recited feature from Appellants' claims requires that the lengths of transmissions and/or receptions *vary* in accordance with a *pre-determined pattern*. It has been alleged that a fixed time period scheme is one type of pre-determined pattern that can be used. Appellants agree. However, the language of Appellants' independent claims requires that the lengths of the transmission/reception windows *vary* and therefore, Johannson et al. fails to teach or suggest this feature. Johannson et al. does teach "flexible window lengths", however, as pointed out in a previous response to Office Action dated April 9, 2008, the window lengths do not vary depending on a pre-determined pattern, but by "factors relating to the communication system":

> "The above cited passage from Johansson et al. fails to teach that either transmissions or receptions vary in accordance with a pre-determined pattern. Johansson et al. only teaches that the communication session window length is *flexible* and that it may be based on one or more factors relating to the performance of the communication system. Rather than being pre-determined, the length of the time window taught by Johansson et al. varies in accordance to factors that ***cannot be pre-determined***, as it cannot be predetermined how many piconets might be connected to a JUMP node at any time or the amount of traffic being communicated through the JUMP node.

Thus, Appellants assert that Johansson et al. fails to teach or suggest that the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern. Again, and on this basis alone, Appellants believe that the rejection to claims 1, 11, 21, and 22 should be reversed and that any claims depending therefrom should likewise be reversed as being dependent upon an allowable claim.

Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-22 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [QUALP839US].

Respectfully submitted,
AMIN, TUROCY & CALVIN, LLP

/Thomas Thibault/_____
Thomas Thibault
Reg. No. 42,181

AMIN, TUROCY & CALVIN, LLP
57th Floor - Key Tower
127 Public Square
Cleveland, OH 44114
Telephone: (216) 696-8730
Facsimile: (216) 696-8731

VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1. (Original) A network node comprising:

a transmitter;

a receiver; and

a controller configured to automatically and repeatedly cause the network node to cycle back and forth between transmitting information on a network with the transmitter and receiving information with the receiver from the network, wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern.

2. (Original) The network node of claim 1 further including a pseudorandom noise generator configured to generate a pseudorandom noise code and wherein the pattern is based on the pseudorandom noise code.

3. (Original) The network node of claim 2 wherein the controller is further configured to cause the transmitter to transmit an offset from the pseudorandom noise code indicative of when the network node will be receiving information.

4. (Currently Amended) The network node of claim 2 wherein the controller and receiver are further configured to cause the network node to receive an offset from the pseudorandom noise code from a second ~~another~~ network node indicative as to when the second ~~other~~ node will be receiving information.

5. (Currently Amended) The network node of claim 4 wherein the controller is further configured to cause the transmission of the information when the pseudorandom noise code offset received from the second ~~other~~ node indicates that the other node is ready to receive the information.

6. (Original) The network node of claim 1 wherein the transmitter is a wireless transmitter and the receiver is a wireless receiver.

7. (Original) The network node of claim 1 wherein the controller is configured to cause the information that is transmitted and received to be processed by spread spectrum technology.

8. (Original) The network node of claim 1 configured to function as a cell phone.

9. (Original) The network node of claim 1 wherein the controller is configured to cause the ratio of the time the network node transmits to the time the network node receives during each neighboring transmit / receive cycle to be substantially constant.

10. (Original) The network node of claim 9 wherein the controller is further configured to cause the transmitter to transmit information indicative of the ratio.

11. (Original) A process of operating a network node comprising automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network and receiving information from the network, wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a predetermined pattern.

12. (Original) The process of claim 11 wherein the pattern is based on a pseudorandom noise code.

13. (Original) The process of claim 12 further comprising transmitting an offset from the pseudorandom noise code indicative of when the network node will be receiving information.

14. (Currently Amended) The process of claim 12 further comprising receiving an offset from the pseudorandom noise code from a second ~~another~~ node indicative as to when the second ~~other~~ node will be receiving information.

15. (Currently Amended) The process of claim 14 further comprising transmitting the information to the second ~~other~~ node when the pseudorandom noise code offset received from the second ~~other~~ node indicates that the second ~~other~~ node is ready to receive the information.

16. (Original) The process of claim 11 wherein the transmitting and receiving is wireless.

17. (Original) The process of claim 11 wherein the transmitting and receiving uses spread spectrum technology.

18. (Original) The process of claim 11 wherein the network node functions as a cell phone.

19. (Original) The process of claim 11 wherein the ratio of the time the network node transmits to the time the network node receives during each neighboring transmit / receive cycle is substantially constant.

20. (Original) The process of claim 19 further comprising transmitting information indicative of the ratio.

21. (Previously Presented) A network node comprising:

means for transmitting information;

means for receiving information; and

means for automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network with the transmitter and receiving information with the receiver from the network, wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern.

22. (Original) Computer readable media embodying a program of instructions executable by a computer program to perform a method of operating a network node, the method comprising:

automatically and repeatedly causing the network node to cycle back and forth between transmitting information on a network and receiving information from the network, wherein the lengths of at least some of the transmissions and/or receptions vary in accordance with a pre-determined pattern.

IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.